REMARKS/ARGUMENTS

Claims 1-15 are pending in this application. Claims 1-15 stand rejected. By this Amendment, claims X have been amended. The amendments made to claims X do not alter the scope of these claims, nor have these amendments been made to define over the prior art. Rather, the amendments to the claims have been made for cosmetic reasons to improve the form thereof. In light of the amendments and remarks set forth below, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance.

Claims 1-10, 12, and 14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by WO 96/37970 to Keskitalo et al. ("Keskitalo"). Applicant respectfully traverses the rejection.

To anticipate a claim under 35 U.S.C. § 102, the cited reference must disclose every element of the claim, as arranged in the claim, and in sufficient detail to enable one skilled in the art to make and use the anticipated subject matter. See PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349 (Fed. Cir. 1998). A reference that does not expressly disclose all of the elements of a claimed invention cannot anticipate unless all of the undisclosed elements are inherently present in the reference. See Continental Can Co. USA v. Monsanto Co., 942 F.2d 1264, 1268 (Fed. Cir. 1991).

Among the limitations not disclosed or suggested are:

> N (N is a positive integer) pilot channels for transmitting reference signals whose transmission signals are known in advance;
> M (M is a positive integer) data channels for transmitting information, wherein each of said M data channels is made to dynamically correspond to one or a plurality of said N pilot channel.

According to the present invention, there are N pilot channels and M data channels. The combination of pilot and data channels are not fixed but can be dynamically changed. This

is unlike the pilot channel transmission method and apparatus disclosed by Keskitalo. Keskitalo discloses a CDMA system wherein pilot and data channels are fixed so that the pilot signals are transmitted to correspond to the data signals. (Keskitalo at pg. 18, ln. 15 *et seq.*). Therefore, there is no disclosure in Keskitalo of data channels made to dynamically correspond to one or a plurality of N pilot channels. Further, Keskitalo uses a pilot signal "that sweeps the cell like a lighthouse" or transmitted so that they "do not overlap." (Keskitalo, pg. 19, ln. 20 *et seq.*). Applicants invention is unlike Keskitalo in that there is not a sweeping pilot signal, i.e., PC1 as shown in Fig. 2, and the transmitted signals clearly overlap e.g., PC1, PC3, and PC4 as shown in Fig. 2 and explicitly claimed e.g., claim 9.

Additionally, Keskitalo, adaptive antennas are used to transmit pilot signals and traffic channels using a common radiation pattern. (Keskitalo, pg. 8, ln. 12). In fact, the present application clearly states that an adaptive antenna should not be used. (Application pg. 5, ln 9).

Therefore, it is asserted that the rejection of claims 1-10, 12, and 14, under 35 U.S.C. § 102 has been overcome. Reconsideration of the rejection of claims 1-10, 12, and 14, under 35 U.S.C. § 102, is respectfully requested in light of the amendments and remarks above.

Claims 11, 13, and 15 stand rejected under 35 U.S.C. § 103 as being obvious in light of Keskitalo. Applicant respectfully traverses the rejection.

To establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify a reference to arrive at the claimed subject matter. The prior art reference must also teach or suggest all the limitations of the claim in question. See MPEP § 706.02(j).

A reference can only be used for what it clearly discloses or suggests. See In re Hummer, 113 U.S.P.Q. 66 (C.C.P.A. 1957); In re Stencel, 4 U.S.P.Q.2d 1071, 1073

(Fed. Cir. 1987). Here, the reference does not disclose or suggest the invention claimed by the Applicant.

On pages 3-5 of the Office Action, the Examiner states that that it would have been obvious or implied in the Keskitalo reference to transmit/receive information by using each of M data channels by selecting an optimal pattern from the L types of directivity patterns in accordance with a position of a mobile terminal used for communication. In making this rejection, the Examiner admits that Keskitalo does not explicitly use this technique, but then states that it would have been obvious to use this technique without providing a reference supporting this reasoning. Additionally, as discussed above, Keskitalo is unlike Applicant's claimed invention. Keskitalo does not disclose or suggest a system where data channels made to dynamically correspond to one or a plurality of N pilot channels as explicitly required in Applicant's claims.

Because the Examiner has not provided a substantive rejection, nor has the Examiner cited a reference supporting his position, it is respectfully requested that the Examiner cite a reference in support of this 103 rejection in accordance with MPEP 2144.03, or withdraw the rejection and allow claim 11, 13, and 15 to issue.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Applicant has responded to all of the rejections and objections recited in the Office reconsideration and Notice of Allowance for all of the pending claims is therefore respectfully requested.

The amendments to the claims are for clarification purposes only and are not intended to limit the scope of the claims in any way. It is asserted that the present amendment places the application in a form for allowance. Entry of this amendment is therefore earnestly solicited.

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

Dated: August 23, 2002

Respectfully submitted,

By _____
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Appendix A

Version With Markings to Show Changes Made

1. (Amended) A cellular system using a code division multiple access (CDMA) scheme, comprising:

N (N is a positive integer) pilot channels for transmitting reference signals whose transmission signals are known in advance; and

M (M is a positive integer) data channels for transmitting information;

wherein each of said M data channels is made to dynamically correspond to one or a plurality of said N pilot channels.

3. (Amended) A system according to claim 1, wherein said pilot channel is used for coherent detection of at least said data channel to which said pilot channel [is made to correspond] corresponds.

4. (Amended) A system according to claim 1, wherein said pilot channel is used for transmission power control on at least said data channel to which said pilot channel [is made to correspond] corresponds.

11. (Amended) A cellular system using a code division multiple access (CDMA) scheme, comprising:

transmission means having N (N is a positive integer) pilot channels;

transmission/reception means having M (M is a positive integer) data channels;

antenna means having L (L is a positive integer) types of directivity patterns; and

notification means for dynamically notifying a correspondence between said data channels and said pilot channels,

wherein information to be transmitted/received by using each of said M data channels is transmitted/received by selecting an optimal pattern from the L types of

directivity patterns in accordance with a position of a mobile terminal used for communication,

a reference signal to be transmitted by using each of said N pilot channels is transmitted by selecting one pilot channel for each directivity pattern used for said data channel, and

said notification means notifies a pilot channel used for transmission with the same directivity pattern as that for said data channel.

13. (Amended) A reference signal transmission method in a cellular system using a code division multiple access (CDMA) scheme of transmitting reference signals by using N (N is a positive integer) pilot channels, transmitting/receiving information by using M (M is a positive integer) data channels, performing transmission/reception by using said data channels through antenna means having L (L is a positive integer) types of directivity patterns, and dynamically notifying a correspondence between said data channels and said pilot channels through notification means, comprising the steps of:

transmitting/receiving information to be transmitted/received by using each of said M data channels by selecting an optimal pattern from the L types of directivity patterns in accordance with a position of a mobile terminal used for communication;

transmitting a reference signal to be transmitted by using each of said N pilot channels by selecting one of said pilot channels for each directivity pattern which is being used on said data channel; and

causing said notification means to notify a pilot channel which is being used for transmission with the same directivity pattern as that for said data channel.

14. (Amended) A base station apparatus in a cellular system using a code division multiple access (CDMA), comprising:

N (N is a positive N (N is a positive integer) pilot channels for transmitting reference signals whose transmission signals are known in advance; and

M (M is a positive integer) data channels for transmitting information,

wherein each of said M data channels is made to dynamically correspond to one or a plurality of said N pilot channels.

15. (Amended) A base station apparatus in a cellular system using a code division multiple access (CDMA) scheme, comprising:

transmission means having N (N is a positive integer) pilot channels;

transmission/reception means having M (M is a positive integer) data channels;

antenna means having L (L is a positive integer) types of directivity patterns; and

notification means for dynamically notifying a correspondence between said data channels and said pilot channels,

wherein information to be transmitted/received by using each of said M data channels is transmitted/received by selecting an optimal pattern from the L types of directivity patterns in accordance with a position of a mobile terminal used for communication,

a reference signal to be transmitted by using each of said N pilot channels is transmitted by selecting one pilot channel for each directivity pattern used for said data channel, and

said notification means notifies a pilot channel used for transmission with the same directivity pattern as that for said data channel.